



Missouri Department of Health and Senior Services

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RASH ILLNESS INVESTIGATION

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The Missouri State Public Health Laboratory (MSPHL) offers testing in support of a rash investigation for the following viruses:

- Vaccinia virus. Vaccinia virus testing will ONLY be performed after approval by Dr. Hamm (1-800-392-0272)
- Varicella zoster (chicken pox)
- Adenoviruses
- Enteroviruses
- Herpes Simplex virus

NOTE: This testing is limited to patients determined to have **low** or **moderate** risk of Smallpox only.

A kit may contain materials for collecting samples for one or more of the viruses listed above. Sample collection procedures, along with the proper collection kits and packaging instructions, are available from the MSPHL. Kits will only be available after consultation with the State Laboratory. Please call 573-751-0633 and ask for Virology.

Vaccinia Virus-associated Rash (Smallpox Vaccination)

Testing available: Polymerase Chain Reaction (PCR)

Turn around time: Testing procedure (PCR) requires 4 hours

A. Protective Equipment to be used for specimen collection:

- Disposable protective latex or vinyl gloves (sterile gloves not required)
- Disposable protective gowns
- N-95 masks or higher
- Protective eyewear
- Shoe covers
- Plastic biohazard bags

B. Specimen collection procedure:

1. Put on protective equipment described above.

NOTE: If the person collecting specimens has been successfully vaccinated for Smallpox, an N-95 mask is not required.

2. Use scalpel (or a sterile 26 gauge needle) to open, and remove the top of the vesicle or pustule and place the skin of the vesicle top into a 1.5- to 2-mL screw capped plastic tube. Let the material dry. Label the tube as outlined below.

3. Scrape the base of the vesicle or pustule with the blunt edge of the scalpel, or with the wooden end of an applicator stick or swab and do the following:
 - a. Apply a microscope slide to the vesicular fluid multiple times, with progressive movement of the slide, to make a touch prep. Make a total of 3 slides with 3 impressions each.
 - b. Allow the fluid to air-dry 10 minutes without smearing.
 - c. Label the slide as outlined below
 - d. Store the dried slide in a plastic slide container
 - e. Store slides in plastic slide holders for shipping. Parafilm may be used to wrap the slide holder to prevent accidental opening. Store slides from different patients in separate plastic slide holders to prevent cross contamination
4. Swab the base of the lesion with a sterile swab. Place the swab in the tube containing the TPB viral transport medium (supplied with kit). Break off the swab and replace lid securely.

NOTE: Any commercially available **viral** transport medium may be substituted for TPB.

C. Label each specimen container and slide with:

- Patient name
- Date of collection
- Source of specimen

D. See “Proper Specimen Packaging” instructions below

NOTE: Please write “**Vaccinia Virus**” in the test requested area of the patient information/ test requisition form.

Varicella zoster (Chicken Pox)

Testing available: PCR and Culture.

Turn around time: PCR procedure requires 4 hours;
virus culture requires 4-14 days.

A. Specimen collection procedure for patients with vesicles or pustule lesions:

1. Unroof the vesicle or pustule using a sterile 26-gauge needle. Place the skin “roof” in a dry, sterile, screw-cap tube.
2. Swab the base of the lesion with the swab from the plastic tube. Swab vigorously enough to ensure cells from the lesion are collected. Return swab to the plastic tube and secure the lid. Do not add transport medium to this tube.
3. Swab the base of the lesion with a sterile swab. Place the swab in the tube containing the TPB viral transport medium (supplied with kit). Break off the swab and replace lid securely.

NOTE: Any commercially available viral transport medium may be substituted for TPB.

B. Specimen collection procedure for patients with scab lesions:

1. Using a scalpel or a sterile 26 gauge needle, pick or pry off as many scabs as possible (at least four) and place in the small, sterile plastic vial (provided).
2. Do not add transport medium to this tube.
3. Swab the base of the lesion with a sterile swab. Place the swab in the tube containing the TPB viral transport medium (supplied with kit). Break off the swab and replace lid securely.

NOTE: Any commercially available viral transport medium may be substituted for TPB.

C. Label each specimen container and slide with:

- Patient name
- Date of collection
- Source of specimen

D. See “Proper Specimen Packaging” instructions below

Other Viral Agents causing rashes

- Adenovirus
- Herpes Simplex Virus
- Enterovirus

Testing available: Culture
Turn around time: 5-16 days

A. Specimen collection procedure:

1. Swab the base of the lesion with a sterile swab.
2. Place the swab in the tube containing the TPB viral transport medium (supplied with kit).
NOTE: Any commercially available viral transport medium may be substituted for TPB.
3. Break off the swab and replace lid securely

B. Label each specimen container and slide with:

- Patient name
- Date of collection
- Source of specimen

C. See “Proper Specimen Packaging” instructions below

PROPER SPECIMEN PACKAGING

Rash Illness

